

**Notice of Allowability**

Application No.

09/884,009

Examiner

Qing-Yuan Wu

Applicant(s)

HSIEH, BOR-MING

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/16/07.
2. ☒ The allowed claim(s) is/are 1-3, 5-6, 8-10, 13, 16-18, 20 and 23 renumbered as 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 8/16/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 8/27/07
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for the examiner's amendment was given in a telephone interview with Mr. William J. Breen, III, Reg. No. 45,313. The claims have been amended in accordance to the attached fax amendment submitted by applicant on August 24, 2007 with a further clarification that claim 10 and the indicated deleted/added subject matters were previously presented and not currently amended.

### **REASONS FOR ALLOWANCE**

3. The following is an Examiner's Statement of Reasons for Allowance:
4. The prior art of record does not expressly teach or render obvious, in the context of the claims taken as a whole, the invention as recited in independent claims 1, 8, 16 and 23.
5. A multi-dimensional service priority queue was uncovered in U.S. Patent 5,872,938 (Williams), a multi-dimensional execution queue wherein in a deterministic amount of time equivalent to an amount of time to insert a SCSI control block into a common queue, associating a second plurality of SCSI control blocks that is priority sorted with the common queue in a

manner that maintains a priority based scheduling semantic of the common queue was uncovered in U.S. Patent 6,609,161 (Young), sleep queues and run queues insertion was uncovered in Applicant Admitted Prior Art. The references taken alone or in combination does not expressly teach or render obvious, in the context of the claims taken as a whole as recited substantially in independent claims 1, 8, 16 and 23 the association of a second plurality of threads from a sleep queue that is priority sorted with a first plurality of threads in the run queue, additionally in light of the definition of a run queue and a thread as defined by applicant in the appeal brief filed 4/24/06 (see second paragraph of office action dated 6/28/06).

6. Neither a reference uncovered that would have provided a basis of evidence for asserting a motivation, nor one of ordinary skilled in the art at the time the invention was made, knowing a multi-dimensional service priority queue, a multi-dimensional execution queue wherein insertion of a SCSI control block into a common queue occurred in deterministic amount of time equivalent to an amount of time to associate a second plurality of SCSI control blocks that is priority sorted with the common queue in a manner that maintains a priority based scheduling semantic of the common queue, and sleep queues and run queues insertion, would have integrated or modified to yield the association of a second plurality of threads from a sleep queue that is priority sorted with a first priority of threads in the run queue as recited in the context of independent claims 1, 8, 16 and 23.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue


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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER

Qing-Yuan Wu

Patent Examiner

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